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This paper deals with deep and surface structure differences and their implication for language teachers. Examples of similar surface structures and dissimilar underlying structures often presented to students of English for pattern drill are pointed out (eg., the "it" in "It's easy to speak English," "It's difficult for us," and "It's hot outside," reflects respectively, extraposition, pronominalization, and association with the weather). English as a second language materials are oriented almost invariably toward imparting as a final goal the ability of the student to give phonological shape to surface structures. The author considers mastery of deep structure principles as important, if not more so, since it is these which govern semantic interpretation. Because control by the student over deep structure differences will not take place unless he is aware of them, one of the aims of language pedagogy must be to bring about that awareness. Drills designed to strengthen this unconscious perception will serve also to measure the extent to which English grammar has been internalized. The author suggests that "restatement" and "transformation" type drills provide the most obvious framework for such practice, and that contrasts of this or any other kind must not be attempted unless the paired structures have already been separately taught. See related document AL 001 549. (AMM)

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*Deep and Surface Structure, and the Language Drill**

William E. Rutherford

In recent years much has been said and written about the relevance of transformational theory for the language-teaching field. Moreover, the number of texts paying at least lip service to transformational principles is growing. Discussion of these principles with reference to pedagogy has extended from the misconstrued "transformational-grammar" popularizations all the way to the position set forth by Chomsky at the 1966 Northeast Conference—and thereafter widely misunderstood—that linguistic theory has at the present time nothing to contribute to a language-teaching technology. However, between these twin misconceptions—on the one hand by a number of textbook authors as to the real meaning of "transformation," and on the other by a large number of linguistic half-sophisticates as to the relevance for language teaching of *any* aspect of transformational grammar—there can be found a very significant body of published research which either "applies," or characterizes the application of, certain findings of generative grammar to the construction of language teaching materials. The key word in the last passage is "findings," for it is above all the *results* of transformational research, not necessarily its theoretical framework, which is of great value to the language teacher. Transformational grammar does not tell us anything about language acquisition, but what it has revealed is the extent to which languages have deep and surface structure differences, underlying regularity, and universal similarity, discoveries which seem to have great pedagogical relevance. It is the implication for language teachers of the first of these revelations which is the subject of discussion in this paper.

It is obvious to any native speaker of English that the difference between sentences like

1. (a) It's a shame he never wins
   and
   (b) It's a game he never wins

is something considerably beyond the mere difference between "shame" and "game." Put another way, substituting "game" for "shame" in the above frame "It's a ——— he never wins" seems to relate the two sentences only in the most superficial sense and at the same time leaves the unmistakable impression that some kind of fundamental distinction has been ignored. It is obvious to most linguists, for example, that (a) is related to That he never wins is a shame in a way that (b) is not, and that (b) is related to He never wins the game in a way that (a) is not. Furthermore, "it" in (a) is not the same "it" as in (b) since it is possible to say Tennis is a game he

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never wins but not * tennis is a shame he never wins, and we know from analysis, of course, that "it" in (a) is the extraposed "it," whereas in (b) it is the pronominal "it." Yet, one of the best known and most widely used ESL texts presents as one so-called *pattern* not only such sentences as "It's easy to speak English" and "It's difficult for us," in which "it" reflects extraposition and pronominalization, respectively, but also "It's hot outside" displaying still another "it," that associated with the weather. Following mass presentation, all of these forms are put through the ubiquitous mammoth substitution drill, in which strings like "easy for you to learn English a year ago" find themselves in the strange company of such items as "warm" and "snowing," only because, presumably, they all occur after that little two-letter word "it." The above sample is no isolated occurrence; more often than not, the overriding consideration in the construction of ESL classroom drills is that they focus upon strings which *look alike*, or in other words, which display *surface similarity*.

Confronted by masses of often unrelated data, the average student, like the small child, will probably be able over a long enough period of time to extract from this data and internalize the rules of the language he is studying. But this is doing it in a way which is not only hard but also costly and time-consuming. ESL materials are oriented almost invariably toward imparting as a final goal the ability of the student to give phonological shape to surface structures. Yet, mastery of deep structure principles is just as important, if not more so, since it is these which govern semantic interpretation. It follows, however, that control by the student over deep structure differences will not take place unless he is aware of them. And I believe that one of the aims of language pedagogy must be to bring about that awareness.

Realization of this aim will depend ultimately upon the nature and organization of the textual resources employed. In such materials not only must the linguistic facts and their presentation have derived from a thorough understanding of the findings of linguistic research, but also the construction of at least some of the drills which incorporate these facts must reflect to some extent the theory within which the facts were revealed. In other words, some drills must be designed to strengthen unconscious perception by the student of the deep structure principles of English, and of the fact that surface structure alone is not sufficient for semantic interpretation. Such drills, it can be added, will serve also to measure not the student's memory capacity but the extent to which English grammar has been internalized.

Drills labeled *transformation* are by now a feature of every language text that comes on the market, with a number of such texts also claiming in general to be "transformational." Yet, although the term *transformation* does not and cannot mean in applied linguistics what it means in formal linguistics, we are never told by the applied linguist precisely what it does mean. *Transformation* in its linguistic sense characterizes a formal procedure whereby deep structures

are mapped into surface structures; *transformation* in its pedagogical sense can only signify a relationship between two phonologically realized surface structures which manifest common deep structure. In some materials, however, the term simply means that something is changed into something else, whatever that may suggest. This last definition fits a kind of drill which has been a feature of language texts since long before the advent of generative grammar, and there is therefore no reason to build it up as something new. What *is* new in pedagogy is the opportunity now to build into drill construction the kind of structure-level distinctions which formal linguistics has been able recently to delineate more and more explicitly. In other words, new products of linguistic research should prompt some new classroom applications.

English abounds in constructions which look alike on the surface but are different underneath, and interesting drills can be devised which exploit the contrast. For example, noun complements and restrictive relative clauses produce many instances of close similarity, so that a drill based upon this pairing might proceed something like

2. (a) Stimulus: **He has a silly idea that she doesn't care.**
   Response: **She doesn't care.**
   (b) Stimulus: **He has a silly idea that she doesn't care about.**
   Response: **She doesn't care about the idea.**

Whereas an appropriate label for the above would be *restatement*, the following drill, in which the complement includes a subjunctive, might be an example of *transformation*:

3. (a) Stimulus: **the suggestion that he reconsider**
   Response: **Somebody suggests that he reconsider.**
   (b) Stimulus: **the suggestion that he reconsidered**
   Response: **He reconsidered the suggestion.**

The drill label in these particular examples—whether it be transformation, restatement, structural replacement, etc.—is not so important. The principle involved is one in which the student responds in such a way as to verify the extent to which perception of an aspect of English deep structure has taken hold.

In the remainder of this paper I shall enumerate some deep structure contrasts which are either obliterated or obfuscated in surface structure, and which are highly amenable to implementation in drill construction for purposes of second language acquisition.

4. Prepositional phrases of *attribution* resemble those of *description*:

   (a) **It's a matter of importance.**
   (b) **It's a matter of business.**

(a), however, is synonymous with the preposed adjective construction "It's an impôrtant mátter," whereas (b) is synonymous with the compound construction "It's a búsiness màtter." That the syntactic difference is more obvious in the second pair is due in part to contrasting stress patterns.

5. Post-copula verb-ing and to+verb nominals resemble the present pro-

gressive and "be to" verb constructions, respectively:

(a) His business is selling. . . . to sell.

(b) His business is branching out. . . . to branch out.

Only the nominals permute with their subjects, of course: Selling is his business, not * branching out is his business.

6. "The shooting of the hunters," by now a part of every linguist's store of examples, represents in its ambiguity a contrast which is a part of everyday speech. Take for instance,

(a) the promise of aid to alleviate suffering

(b) the promise of A.I.D. to alleviate suffering.

"Aid" is the deep structure object of "promise" in (a); "A.I.D." is the deep structure subject in (b). Related to (a) is Someone promises aid (in order) to alleviate suffering. Related to (b) is A.I.D. promises to alleviate suffering.

7. The verb+to+verb category obscures at least a triple distinction with examples like

(a) We prepared to eat lunch.

(b) We stopped to eat lunch.

(c) We had to hurry to eat lunch.

(a) is a verb + complement construction whose constituents are not movable. Examples (b) and (c), both of which, unlike (a), can insert "in order," represent purpose and dependency relationships, respectively. Only in (c), however, can the to+verb part prepose: (In order) to eat lunch, we had to hurry.

8. Deletion possibilities with for+NP in "too/enough" constructions produce very deceptive surface similarities:

(a) The people are too crowded to dance.

(b) The room is too crowded to dance.

"For the people" has been an obligatory deletion in (a), whereas it is optional in (b).

9. Unlike many other languages, both pre- and post-copula comparisons in English use "than":

(a) Fiats are more economical than Fords.

(b) Fiats are more economical than comfortable.

Restoring deleted parts in both sentences produces Fiats are more economical than Fords are and Fiats are more economical than they are comfortable.

10. Relativizing on different parts of a NP dominating N Prep NP will produce

(a) the keys to the house that he bought

(b) the keys to the house that he brought

where under no circumstances can the owner have brought the house, nor is it likely that he has bought the keys.

11. Lees's well known "drowning cats" example is not hard to duplicate:

(a) Moving targets are hard to hit.

(b) Moving targets is hard work.

and if the student eventually understands why the old saying "Too many

cooks spoils the broth" uses a singular and not a plural verb, something will indeed have been accomplished.

12. The preposition in a verb+prep combination, with following direct object, resembles a prep phrase of duration:

(a) He waited for a minute.
(b) He waited for a signal.

Intonation distinguishes them, however, since the sentence-final contour will normally descend on "waited" in (a) and on "signal" in (b).

13. A wh- clause embedded as subject sometimes looks like the same clause functioning as sentence adverbial:

(a) Where he comes from is important.
(b) Where he comes from, the family is important.

14. Confusion occasionally arises within embedding itself, i.e. wh-X vs. wh-X-ever:

(a) Who he lives with is a secret.
(b) Whoever he lives with is a secret agent.

Correspondence across the copula applies to the whole clause in (a) but to only "whoever" in (b).

15. Noun complements, in addition to example 3 above, can include for+NP —to+verb instead of that+S:

(a) advice for them to consider seriously
(b) advice for them to consider the proposal

16. Pseudo-cleft sentences resemble both sentences with an embedded wh-clause as subject of an active verb:

(a) What he wants is more of your business.
(b) What he wants is none of your business.

and passive sentences with embedded wh- clause as subject:

(c) What he did was criticize.
(d) What he did was criticized.

Underlying (c) is He criticized. Underlying (d) is Someone criticized what he did.

17. Verb root vs. participle also furnishes the only surface distinction between

(a) They said they'd study English.
(b) They said they'd studied English.

but of course "they'd" in (a) is they would, in (b) they had.

18. There is also the present perfect with transitive verb vs. prenominal past participle (after passive, relative clause, and deletion transformations):

(a) He's invited a guest.
(b) He's an invited guest.

The same principle applies to the present progressive and prenominal verb-ing:

(c) It's confusing the issue.
(d) It's a confusing issue.

Prenominal verb-ing is sometimes a real adjective, sometimes not:

(e) It was a moving train.
(f) It was a moving experience.

19. By+NP following the passive can make real manner adverbials look like the subject of the corresponding active:

(a) It was done by striking workers.

(b) It was done by striking a match.

The NP following "by" is of course a prenominal verb-ing modifier in (a) and a poss+ing nominalized sentence, with the possessive deleted, in (b).

20. Passive transformations focusing on "Suzy" in both They taught Suzy to be a dancer and They thought that Suzy was a dancer will yield, through the regular passive

(a) Suzy was taught to be a dancer.

and through the second passive

(b) Suzy was thought to be a dancer.

21. Surface structure clouds the distinction between verb + complement and permuted indirect object with "for":

(a) We found him a nuisance.

(b) We found him a job.

Even sentence order can play a role in the interpretation of what would otherwise be ambiguous, since I had Mary for lunch and I made her a sandwich is fine, but I made Mary a sandwich and I had her for lunch has cannabalistic overtones.

22. Specified vs. unspecified "whoever," as in

(a) Whoever wants it just called.

(b) Whoever wants it can have it.

have paraphrases which split along the "some/any" axis: The someone who wants it just called./Anyone who wants it can have it.

23. Auxiliary attraction distinguishes sentence negation from constituent negation, as in

(a) At no time was he able to make a profit.

(b) In no time he was able to make a profit.

24. Intonation is one thing that distinguishes -ly sentence modifiers from manner adverbs in sentence-final position:

(a) She's answered all the questions, clearly.

(b) She's answered all the questions clearly.

However, when "clearly" separates Aux and the rest of the VP constituents, the sentence is ambiguous:

(c) She's clearly answered all the questions.

and if it preposes:

(d) Clearly, she's answered all the questions.

it can be only a sentence modifier, synonymous with It's clear that she's answered all the questions.

25. In superlatives with infinitival complements, such as

(a) The first person to finish is the winner.

(b) The first person to congratulate is the winner.

"person" is subject of "finish" in (a), object of congratulate in (b), and only in (b) is the sentence grammatical without "first": the person to congratulate, not * the person to finish.

26. -ed suffixation applies to verbs to form participles, or to nouns to make them possessives:

(a) a perfectly planned structure

(b) a perfectly proportioned structure.

Only (b) has the paraphrase a structure of perfect proportions.

27. The number of different "so"s in the language is at least four, but the subordinator "so" and the sentence connector "so" are deceptively similar:

(a) He's giving me a gift so I'll give him one.

(b) He's giving me a gift, so I'll give him one.

"So" in (a) is of course "so that," with "that" being deleted.

28. There are formations in which the only distinction, other than lexical, between verb + particle and verb + preposition is in stress:

(a) What's he lôoking úp?

(b) What's he lóoking àt?

Noun complement and cleft sentence again throw verb + prep and intransitive verb + prt together:

(c) It was his request that they môve ón.

(d) It was his request that they móved òn.

The identical stress contrast also marks similar constituents in adjective constructions with "too":

(e) The truck is too big to gô thróugh.

(f) The tunnel is too small to gó thròugh.

where (f) again is an instance of verb + prep. Although (e) looks like intransitive verb + prt, it is really an example of verb + prep, with deleted prepositional object. An intransitive verb + prt followed by a locative adverbial sounds almost exactly like a verb with two locatives:

(g) They wôrk oût in the gym.

(h) They wôrk oŭt in the field.

Only in (h) is there a constituent break before "out," allowing insertions like **They work all day out in the field.**

29. Contour is the only distinctive factor separating a restrictive relative clause such as **(a) It was a movie that she was interested in going to.** from a cleft sentence construction such as **(b) It was a movie that she was interested in going to.**

30. The compound/nominal phrase opposition is prevalent in everyday speech. Thus **(a) a Frénch instrùctor** is an instructor of French, who may or may not himself be French, whereas **(b) a Frênch instrúctor** indicates only that the instructor is of French nationality. The same contrast is even more common with verb-ing: **(c) living stàndard; (d) living wáge; (e) cútting èdge; (f) cûtting remárk.**

31. When a third element is added, the complexity is compounded:

(a) ôld míning còmpany

(b) góld mìning còmpany

(c) gôld mîning próspector

in which

(a) is a mining company that's old,

(b) is a company that's for mining gold, and

(c) is a prospector who mines gold.

Possibly the most interesting area of all for deep and surface structure contrasts is where the deep structure difference is reflected in two instances of otherwise identical surface appearance

by only a slight phonological contrast—a case, in other words, of not morphophonemic but *syntacto*phonemic realization.

32. Notice, for example, that for most speakers the following two phrases do not mean the same, although in print they are identical:

(a) something I have to do/hæftə/

(b) something I have to do /hævtə/

The underlying forms for (a) and (b) are I have to do something and I have something to do, respectively. The same contrast is also present in

(c) something he'd done

(d) something he hád done

Oppositions such as these can form the basis for construction of gigantic minimal pairs, which are extremely useful for increasing student perception of important syntactic distinctions.

33. A similar principle is involved in the following pairs of sentences:

(a) Who's the person you want to call? /wanə/

(b) Who's the person you want to call? /want tə/

where somewhere in the derivational history of (a) is You want to call the person, in (b) You want the person to call. Sentence (b) is perhaps ambiguous for some speakers, although (a) can have only one interpretation. Again, even though the deep structure difference between (a) and (b) is a highly important one, the two are distinguished in speech by only a small phonological contrast, and in writing not at all.

34. Insofar as items like "wanna, hafta, gotta," etc. (as opposed to "want to, have to, got to") carry weak stress, they resemble modals. The clearest indication of this is perhaps "gonna" vs. "going to":

(a) I'm going to work. /gónə/

(b) I'm going to work. /gówiŋtə/

Notice that the main verb in (a) is "work," whereas in (b) it is "go." Moreover, "work" in (b) isn't even a verb at all but a noun, like "school" in I'm going to school. Sentence (a) is therefore very much like I'll work, whereas (b) is like I'm riding to work. Additional differences become apparent in pairs like

(c) They're going to battle with their allies. /gówiŋtə/

(d) They're going to battle with their allies. /gónə/

where in (d) the use of "gonna" makes the allies the enemy. This is so because "battle with" in (d) is verb + prep, the object of which is interpreted semantically as the opposing force. "Battle" in (a) is a noun, part of "go to battle," and "with" in the following prep phrase is interpreted semantically as *comitative* "with." The "allies" are therefore still part of the alliance.

A few suggestions were offered earlier concerning how such utterance contrasts could be made use of in the classroom situation, and it was pointed out that *restatement* and *transformation* type drills provide the most obvious framework for such practice. It should also be noted that contrasts of this or any other kind must not be attempted unless the paired structures have already been separately intro-

duced and separately mastered. The significance (and fascination) of the deep structure *distinctions* will be lost if the student does not have a prior independent command of the *individual* structures under scrutiny. The one area where deviation from this principle can be not only tolerable but profitable is that where classroom activity focuses upon only *perception* of contrasting patterns, "contrast" in this instance being of the surface phonological variety cited in examples (32) to (34). An "utterance discrimination" exercise—where the student identifies by A or B a mixture of utterances differing, for example, only in the manner of "something I /hæv tə/ do"/ "something I /hæftə/ do"—might well appear after mastery of the syntax of A, but not before that of B.

The details, however, of practical incorporation into drill work of the deep and surface structure phenomena under discussion ought to be fairly obvious to those skilled in the compilation of language-teaching materials. It is important to recognize that drill types which are already in common use, such as those mentioned above can be made use of for this purpose. In the belief that ideas for classroom application will not be difficult to come by, the weight of discussion has concentrated upon attempting to reveal not only how wide the range of coalescent deep and surface structure formations in English really is, but also how important it is to establish as one of the goals of language pedagogy the perception by the learner of such phenomena.